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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,222	02/09/2004	Jen-Yuan Huang	TOP 355	6740

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EXAMINER

THOMAS, LUCY M

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/773,222	Applicant(s) HUANG, JEN-YUAN	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 2-5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 2-5 recite that the negative ion generating device is "disposed" on the motherboard, optical disk drive, hard disk drive, power supply respectively, where Claim 1 recites a negative ion generating device, "directly built-into" the motherboard, making it unclear as to whether the superior claim is limited or modified.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being dependent on cancelled claim 6. It will be assumed that Claims 7-8 depend on Claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (WO 01/69357). Regarding Claim 1, Park discloses an electronic apparatus (Figure 1) comprising: a housing; a motherboard (inherently part of CPU), installed in the housing, generating positive ions during operation; a negative ion generating device 100 for generating negative ions, wherein the positive ions are neutralized by a portion of the negative ions when the motherboard operates; and a power supply comprising a fan; wherein the negative ions are exhausted out of the housing via the fan of the power supply (Figure 2, Abstract). Park does not specify that the ion generating device is directly built-into the motherboard. It would be obvious to those skilled in the art at the time the invention was made to modify Park's apparatus to provide a negative ion generating device directly built-into the motherboard, because it has been held that integration or "directly building into" of two formerly separate parts involves obvious engineering choice. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding Claims 2-3 and 5, Park does not disclose the electronic apparatus, wherein the negative ion generating device is disposed on the motherboard as recited in Claim 2, or on an optical disk drive as recited in Claim 3, or in a power supply as recited in Claim 5. It would be obvious to those skilled in the art at the time the invention was made to provide a negative ion generating device to be disposed on an optical disk drive, or a motherboard, or a power supply, where the cooling fan in the computer is located and to anionize contaminated air flow to prevent failure of these critical

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components of the computer, because it has been held that integration or “disposing” of two formerly separate parts involves obvious engineering choice. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding Claim 4, Park discloses the electronic apparatus further includes a hard disk drive on which the negative ion generating device is disposed (see Figure 6, Page 3, lines 17-25, Page 6, lines 6-13).

Regarding Claim 7, Park discloses the electronic apparatus, wherein the fan is a heat-dissipating fan 400 for the electronic apparatus (Page 11, lines 18-22, Page 17, line 17).

Regarding Claim 8, Park discloses the electronic apparatus, wherein the electronic apparatus further includes a central processing unit, and fan 400 is a heat-dissipating fan for the central processing unit (Page 11, lines 18-22, Page 17, line 17). Park does not use the word CPU, but it is understood that the computer inherently has a central processing unit.

Regarding Claim 9, Park does not disclose the electronic apparatus, wherein the negative ion generating device includes rare earth elements. It would be obvious to those skilled in the art at the time the invention was made to use a coating of rare earth elements on the ion generating electrodes to provide increased ionization as rare earth compounds are highly electron emissive.

Regarding Claim 10, Park discloses the electronic apparatus, wherein the negative ion-generating device includes a high-voltage discharge terminal (see contact plates 51-2) for decomposing air to generate the negative ions (see Abstract, Page 6,

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lines 22-24, Page 9, lines 10-16). Regarding Claim 11, Park discloses the electronic apparatus, wherein the negative ion-generating device further includes a ground terminal (see contact plates 44) for grounding positive ions generated from the dissolved air (Page 9, lines 10-16).

Regarding Claim 12, Park discloses the electronic apparatus, wherein the negative ion generating device further includes a power terminal, connected to the motherboard, for providing power required by the negative ion generating device (Page 11, lines 18-22).

Regarding Claim 13, Park discloses the negative ion generating device further includes a power terminal connected to the power supply, for providing power required by the negative ion generating device (Page 11, lines 18-22). Regarding Claim 14, Park discloses the electronic apparatus further comprising: a housing, which the motherboard and the negative ion generating device is disposed (see Figure 1 and 6). Regarding Claim 15, housing shown in Figure 1 and 6, the housing includes an opening 2 and the fan 400 is disposed in the opening.

Regarding Claim 16, Park discloses the electronic apparatus, wherein the electronic apparatus is a computer (see Abstract). Regarding Claim 17, Park discloses a computer, which may be considered to be portable as the computer may be moved and relocated.

Regarding Claim 18, Park does not disclose that the computer is used as a server, however it would have been obvious those skilled in the art at the time the invention was made that any computer, including one used as a server should be

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provided with the negative ion generating device of Park to prevent the interior of the computer from being contaminated which would increase the reliability of the computer.

Claim 20, recites exclusion of elements, a fan (Claim 20), and the fan 400 disclosed by Park is not on the motherboard or ion generating device.

Allowable Subject Matter

6. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 19 limits Claim 1, by excluding the element, a secondary housing, and the Prior Art of record doesn't meet the negative recitations.

Response to Arguments

7. Applicant's arguments filed 5/05/2006 have been fully considered.

Applicant's arguments with respect to claim 1, have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicant's arguments toward Park reference: Park's apparatus removes contaminants from the air within the computer. The contaminants include ions, both positive and negative, and the source of these ions is the electronic components inside the computer, including those on the motherboard, and materials such as resin or organic polymers. Park specifies that the contaminants are removed from the air so that the contaminant air is not inhaled by humans, and also explains the health benefits of negative ions to human health, which is due to their ability to bind with free radicals

and neutralize them. In case of a computer, both positive and negative ions are byproducts of computer operation, and depending on the materials and components inside the computer, they can be harmful to the critical components.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT
July 03, 2006


BURTON S. MULLINS
PRIMARY EXAMINER